

Physical and biological database management of Sakaerat Environment  
Research Station (SERS).

CHANCHAI SANGUANPONG, SM. 1.

**Thesis. Kasetsart University., 1993.**

### **ABSTRACT**

Since various kinds of data of Sakaerat Environment Research Station supplied by remote sensing system and secondary sources are already sufficient, the problem is not one of collection but of management.

The application of Geographic Information System (GIS) was being use as a tool to link between those data through GISMANAGE package on personnel computer at Kasetsart University. In this study it is possible to bring together data different kinds and varying sources i.e., land use, slope, elevation, soil and geology, greatly enhancing their value which are ready to manipulate to pursue aims. The interest are aimed at : storage, creation and analyzing of physical and biological factors into system map.

The advantage of edit, load and overlay sub menu in GIS MANAGE provide data input, data restoration and data manipulation routine which can be link together with proper external statistical equation.

The deductive process was applied to find out the close relationship between elevation, slope, soil and geology while land use was dependent. The best solution show that land use was limited by elevation, soil and geology but slope was negligible. The multiple regression equation of these relation was

$$\text{Land use} = 7.49306386 - 0.57018740 (\text{elev.}) - 0.10193283 (\text{soil}) - 1.14630913 (\text{geol.})$$

An analyzed land use map was created using those equation form through GISMANAGE system which convince the feasibility of data base management.